Application No. <u>09/457,765</u>

Amendment dated February 28, 2005

Page 2

Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

- 1. (Currently amended)¹ A batch process for preparation of ampicillin comprising: acylating 6-aminopenicillanic acid (6-APA) with a phenylglycine derivative in the presence of and an enzyme to form a reaction mixture wherein the process is carried out while
 - i) maintaining the total concentration in the reaction mixture of 6-APA and ampicillin combined is substantially throughout the reaction, greater than 250 mM;
 - ii) metering in partially the 6-APA and/or the phenylglycine derivative in the course of the acylation reaction to thereby maintain the concentration of dissolved 6-APA is lower than 300 mM throughout the reaction; and
 - iii) maintaining the molar ratio of the total quantity of phenylglycine derivative to the total quantity of 6-APA is less than 2.5.
- 2. (Previously presented) Process according to Claim 1, wherein the acylation reaction is carried out while the total concentration of the 6-APA and ampicillin present in the reaction mixture is, substantially throughout the reaction, greater than 300 mM.
- 3. (Currently amended) Process according to any one of Claims 1 or 2, wherein the acylation reaction is carried out while metering in partially the 6-APA and/or the phenylglycine derivative to thereby maintain the concentration of dissolved 6-APA is kept lower than 250 mM throughout the reaction.

¹ To conform to the last amended claim as presented with the Amendment filed on April 16, 2004. The same applies to claims 3 and 14. These claims were inadvertently presented without the omission of the previously canceled language in the listing of claims presented with Appellant's Brief Under 37 C.F.R. §41.37.

Application No. <u>09/457,765</u>

Amendment dated February 28, 2005

Page 3

- 4. (Previously presented) Process according to claim 1, wherein the acylation reaction is carried out while the molar ratio of the total quantity of phenylglycine derivative to the total quantity of 6-APA is less than 2.0.
- 6. (Previously presented) Process according to Claim 1, wherein the phenylglycine derivative is metered in as a salt of D-phenylglycine amide and an acid.
- 7. (Previously presented) Process according to Claim 6, wherein the phenylglycine derivative is metered in the form of a solution of D-phenylglycine amide.1/2 H₂SO₄ in water.
- 14. (Currently amended) Process according to Claim 1, which comprises charging wherein, in order to maintain the concentration of dissolved 6-APA lower than 300 mM throughout the reaction, a portion of the total amount of 6-APA is-charged to the reaction mixture at the beginning of the reaction such portion providing a concentration of dissolved 6-APA less than 300 mM and introducing the remainder of the total amount is introduced during the remainder of the acylation reaction to maintain the concentration of dissolved 6-APA less than 300 mM.
- 15. (Previously presented) Process according to Claim 14, wherein the concentration of dissolved 6-APA is kept lower than 250 mM throughout the acylation reaction.
- 16. (Previously presented) Process according to Claim 15, wherein the total concentration of the 6-APA and ampicillin present in the reaction mixture is, substantially throughout the acylation reaction, greater than 300 mM.

Application No. <u>09/457,765</u>

Amendment dated February 28, 2005

Page 4

17. (Previously presented) A process for the preparation of ampicillin by acylating a

quantity of 6-aminopenicillanic acid (6-APA) with a quantity of phenylglycine derivative and

an enzyme in an aqueous reaction medium to provide a reaction mixture containing

dissolved 6-APA; said process comprising

initially introducing a part of said quantity of the 6-APA and/or a part of the quantity of

phenylglycine derivative into the reaction medium under conditions allowing ampicillin to be

formed by the acylation reaction and,

thereafter adding the rest of the quantity of 6-APA and/or phenylglycine derivative, under

conditions whereby ampicillin will continue to be formed by the acylation reaction, and

wherein the concentration of dissolved 6-APA in the reaction mixture is, throughout the

acylation reaction, lower than 300 mM and the total combined concentrations in the reaction

mixture of 6-APA and formed ampicillin is greater than 250 mM; and further

wherein the molar ratio of the quantity of phenylglycine derivative to the quantity of 6-APA

is less than 2.5.